Catalogue of American Amphibians and Reptiles.

POUGH, F. HARVEY. 1977. *Uma notata.*

Uma notata Baird
Colorado Desert fringe-toed lizard

Uma notata Baird, 1859:253. Type-locality, "Mojave Desert," in error, corrected to "Colorado Desert, California" by Heifetz (1941:101). Holotype, U. S. Nat. Mus. 4124, collected by Lt. Williamson and Dr. A. L. Heerman (holotype not seen by author).
Callisaurus notatus: Cope, 1896:1049.

• CONTENT. Two subspecies are recognized: *U. n. notata* and *U. n. rufopunctata.*

• DEFINITION AND DIAGNOSIS. A medium-sized species of *Uma* (maximum snout-vent length 121 mm in males, 94 mm in females) with a dorsal pattern of ocelli that form lines over the shoulders. The single ventrolateral bar may extend onto the dorsum as a thin line. The gular chevrons are faint or broken medially. There are usually 3, sometimes 4 internasals.

• DESCRIPTIONS. For the best descriptions, see Cope (1900), Heifetz (1941), Smith (1946), and Norris (1958). See COMMENT.

• ILLUSTRATIONS. Heifetz (1941), Smith (1946), Norris (1958) provide photographs. Line drawings of scutellation are in Cope (1900), Heifetz (1941), and Smith (1946). Color illustrations are in Schmidt and Inger (1957), and Cochran and Goin (1970). Stebbins (1954, 1966) gave diagrams of the venter.

• DISTRIBUTION. *Uma notata* occurs in areas of wind-blown sand in the Colorado Desert of California and northeastern Baja California, eastward through the Gran Desierto to southwestern Arizona, and southward along the Gulf of California in northwestern Sonora, Mexico. The southern limits of the species' range in Sonora are not known (Norris, 1958; Smith and Hensley, 1958). Photographs of habitat are in Stebbins (1944), Norris (1958), and Mayhew (1966).

• FOSSIL RECORD. None.

• PERTINENT LITERATURE. The most comprehensive account of the species is that of Norris (1958). See also Cope (1900), Van Denburgh (1922), Smith (1946), and Mayhew (1966, 1968).

Cook (1949) and Licht (1964a, 1964b, 1965) studied metabolism and heart rate. Chew and Damman (1961) and Deavers (1972) studied water relationships. Pough (1969a, 1969b, 1976) found no physiological differences between *U. n. notata* and *U. inornata*. Cowles (1939), Cowles and Bogert (1944), Mayhew (1964b), and Brattstrom (1965) provided temperature data. Regal (1967) reported voluntary hypothermia in *U. notata*.

Mayhew (1961, 1964a, 1966, 1967) and Mayhew and Wright (1970) studied reproduction. Shaw (1952) described the eggs of both subspecies. For background color-matching, see Klauber (1939), Stebbins (1944), Norris (1958, 1967), and Norris and Lowe (1964). Lynn, *et al.* (1966) described the thyroid gland. Maderson *et al.* (1970), and Stewart and Daniel (1975) studied the epidermis. Presch (1970), Earle (1962), Wever and Peterson (1963), and Peterson (1966) studied the ear and hearing. Gorman *et al.* (1967) found $2n = 12$ metacentric macrochromosomes and 22 microchromosomes. Guttman (1970) compared the hemoglobin with that of other sand lizard genera.

Shaw (1950) described the diet of captive individuals. Funk (1965) recorded *U. n. rufopunctata* in the diet of *Crotalus cerastes*. Carpenter (1963) described display patterns.

• ETYMOLOGY. *Notata* (Latin) means known; *rufopunctata* (Latin, *rufus* "red" or "reddish" and *punctus* "pricked in") refers to the reddish color of the dorsal ocelli.

1. *Uma notata notata* Baird

Uma notata Baird, 1859:253. See species synonymy.
Uma notata notata: Heifetz, 1941:101. First use of trinomial. See REMARKS.

• DIAGNOSIS. This subspecies is characterized by retention of lateroventral orange markings throughout the year, and by wide ventrolateral black bars.

• REMARKS. Heifetz (1941) included part of the Arizona-Sonora population in this subspecies. Norris (1958) restricted *U. n. notata* to populations west of the Colorado River. Thus, Smith and Taylor's (1950:355) restriction of the type-locality to "Yuma, Yuma County, Arizona" is unacceptable.

2. Uma notata rufopunctata Cope

Uma rufopunctata Cope, 1895:938. Type-locality, "Arizona," = Monument 200, Yuma Desert [Yuma County], Arizona (*fide* Cochran, 1961:152). Syntypes, U. S. Nat. Mus. 21846–28147, 21849–21852, Univ. Illinois Mus. Nat. Hist. 40750, collected 15–16 May 1894 by E. A. Mearns (not examined by author).
Callisaurus rufopunctatus: Cope, 1896:1049.
Uma notata cowlesi Heifetz, 1941:104. Type-locality, "Tepoca Bay, Sonora, Mexico." Holotype, California Acad. Sci. 53370, collected 25 April 1921 by J. R. Slevin (not examined by author).
Uma notata rufopunctata: Norris, 1958:290. First use of combination.

• DIAGNOSIS. This subspecies is characterized by the absence of orange ventral markings except in the breeding season, and by narrow ventrolateral black bars.

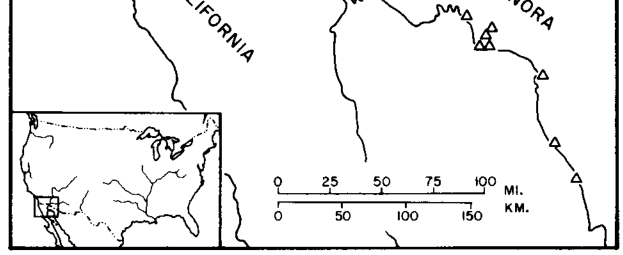
• REMARKS. Heifetz (1941) based the subspecies *U. n. cowlesi* on specimens from Tepoca Bay, Sonora with very narrow ventrolateral blotches. I agree with Norris (1958) that more information on variation in the *Uma notata* populations of Baja California is needed before this character can be evaluated. Smith and Hensley (1958) reported a specimen of *U. n. rufopunctata* from 11.5 mi NE Puerto Peñasco, Sonora with the orange ventrolateral stripe characteristic of *U. n. notata*. This character may be more variable than current reports indicate.

COMMENT

Uma was long considered monotypic. References to "*Uma notata*" especially before 1941, when *U. inornata* and *U. scoparia* were resurrected (Heifetz, 1941), can be correctly attributed to species only if detailed locality data, descriptions, or photographs are given.

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MAP. Circles mark localities for *U. n. notata*, triangles for *U. n. rufopunctata*; solid triangle marks type-locality (that of *notata* is too indefinite to locate). The species is restricted to wind-blown sand dunes, so the distribution is discontinuous.

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